

In the claims: The claims are as follows.

1. (Currently amended) A method of operation of a telecommunication device, comprising:

~~the sender protocol layer of a sender transmitting segments~~  
at a rate of transmission over a communication path to a receiver telecommunication device and increasing the rate of transmission starting from a first starting point for the rate of transmission, based on feedback ~~the sender receives~~ received from ~~a the receiver telecommunication device~~;

~~the sender~~ receiving a message including one or more bits set to convey an indication of low congestion; and

~~the sender~~, in response to the indication of low congestion, performing an accelerated start so as to reach maximum throughput in less time by increasing the data transmission rate so as to achieve increased throughput changing to a second starting point greater than the first starting point and greater than the current rate of transmission, and increasing the rate of transmission starting from the second starting point.

2. (Currently amended) The method of claim 1, wherein ~~the sender protocol layer is a transport layer of transmission control protocol and in transmitting segments at a rate of transmission,~~ ~~the sender protocol layer starts~~ includes initializing a congestion window at a size of to a first starting number of segments and initially increases increasing the congestion window by one a predetermined number of segments segment each time it ~~receives an acknowledgement for a segment it has sent~~ is received.

3. (Currently amended) The method of claim 2, ~~further wherein in~~ in increasing the data transmission rate, the sender performs performing an the accelerated start in which the sender sets a

~~slow start threshold to a standard initial value and re-~~  
~~initializes the congestion window value~~ size is re-initialized to  
a second starting number of segments greater than the first  
starting number of segments~~new predetermined value to achieve~~  
~~increased throughput, and then grows the congestion window~~ size  
is grown at a predetermined rate in ~~respect~~ response to received  
positive acknowledgments.

Claims 4-8 are canceled.

9. (Currently amended) The method of claim 2, wherein ~~in~~  
~~increasing the data transmission rate, the sender protocol layer~~  
~~grows~~ performing the accelerated start includes growing the  
congestion window at ~~the predetermined~~ a window growth rate of  
one segment for every received positive acknowledgement, but  
~~adjusts~~ adjusting the window growth rate ~~based on standard~~  
~~congestion principles~~ in the event of an indication of other than  
low congestion.

10. (Currently amended) The method of claim 3, wherein ~~the sender~~  
the accelerated start is performed ~~increases the data~~  
~~transmission rate after a connection between the sender and with~~  
the receiver is first established, ~~and further wherein the~~  
~~congestion window is initially set to a higher value than is used~~  
~~in standard transmission control protocol.~~

11. (Currently amended) The method of claim 10, wherein the  
~~protocol layer is a transmission control protocol layer and the~~  
indication of low congestion is based on the value of a bit in a  
~~header or is otherwise provided with a received TCP SYN or TCP~~  
~~SYN/ACK sent to the sender by~~ message received from either the  
receiver or by an intermediate node along the communication path  
or by a centralized node outside or along the path.

12. (Currently amended) The method of claim 3, wherein ~~increasing the data transmission rate~~ the accelerated start is performed after transferring to a new communication path between the sender and the receiver for an existing connection with the receiver, and further wherein the congestion window size for the new path is initially set to the value for the congestion window when the path transfer ~~occurred~~ occurs.

13. (Currently amended) The method of claim 12, wherein ~~the protocol layer is a transmission control protocol layer and the indication of low congestion is based on the value of a bit in a header or is otherwise provided with a received TCP ACK sent to the sender~~ message received from by either the receiver or by an intermediate node along the communication path or by a centralized node outside or along the path.

14. (Currently amended) A telecommunication device, comprising a protocol layer configured for:

a protocol layer for sending and receiving segments, for transmitting segments at a rate of transmission and increasing the rate of transmission starting from a first starting point for the rate of transmission, based on acknowledgements ~~feedback~~ indicating successful receipt of the segments, ~~;~~

~~for~~ receiving a message including one or more bits set to convey an indication of low congestion, ~~;~~ and,

in response to the indication of low congestion, for performing an accelerated start so as to reach maximum throughput in less time by changing to a second starting point greater than the first starting point and greater than the current rate of transmission, and increasing the rate of transmission starting from the second starting point ~~increasing the data transmission rate so as to achieve increased throughput.~~

15. (Currently amended) The telecommunication device of claim 14, wherein the protocol layer is a transport layer of a transmission control protocol, and is configured to start a congestion window at a ~~size of a first~~ starting number of segments and to initially increase the congestion window by ~~one segment~~ a predetermined number of segments each time ~~it receives an~~ it is received acknowledgement for a segment ~~it has sent~~; and further wherein the protocol layer is configured to perform ~~an the~~ the accelerated start in which ~~the telecommunication device sets a slow start threshold to a standard initial value and re-initializes by~~ re-initializing the congestion window to a second starting number of segments greater than the first starting number of segments ~~the congestion window value to a new predetermined value to achieve increased throughput, and then grows~~ growing the congestion window size at a predetermined rate in ~~respect~~ response to received positive acknowledgments.

16. (Currently amended) A telecommunication system, comprising a plurality of intermediate nodes and also a plurality of telecommunication devices, wherein at least one of the telecommunication devices ~~includes a protocol layer for sending and receiving segments, wherein:~~

~~the protocol layer is configured to transmit segments at a rate of transmission and to increase the rate of transmission based on acknowledgements indicating successful receipt of the segments;~~

~~the telecommunications device is configured to receive a message including one or more bits set to convey an indication of low congestion; and~~

~~the telecommunication device is configured to increase the data transmission rate so as to achieve increased throughput in response to the indication of low congestion~~ is as in claim 14.

17. (Currently amended) A computer program product comprising: a computer readable storage structure embodying computer program code thereon for execution by a computer processor in a telecommunication device having a protocol layer for sending and receiving segments, with said computer program code including instructions for performing the method of claim 1+

~~the protocol layer transmitting segments at a rate of transmission and increasing the rate of transmission based on acknowledgements the sender receives from the receiver;~~

~~the telecommunication device receiving a message including one or more bits set to convey an indication of low congestion; and~~

~~in response to the indication of low congestion, the telecommunication device increasing the data transmission rate so as to achieve increased throughput.~~

18-21. Canceled.

22. (New) The telecommunication system of claim 16, wherein the protocol layer is a transport layer of real time control protocol layer or other streaming or datagram protocols.

23. (New) The telecommunication system of claim 16, wherein the telecommunication system includes a radio access network.

24. (New) The telecommunication system of claim 16, wherein the telecommunication system includes a wireless telecommunication system using enhanced general packet radio service or uses general packet radio service.

25. (New) The telecommunication system of claim 16, wherein telecommunication system includes a Universal Mobile

Telecommunication System network.

26. (New) The telecommunication system of claim 16, wherein the telecommunication system uses code division for providing multiple access.

27. (New) A telecommunication device, comprising:

means for transmitting segments at a rate of transmission and increasing the rate of transmission at a first rate of increase starting from a first starting point for the rate of transmission, based on feedback indicating successful receipt of the segments;

means for receiving a message including one or more bits set to convey an indication of low congestion; and,

means for, in response to the indication of low congestion, performing an accelerated start so as to reach maximum throughput in less time by changing to a second starting point greater than the first starting point and greater than the current rate of transmission, and increasing the rate of transmission starting from the second starting point.